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CLEAN VERSION OF ALL PENDING CLAIMS

What is claimed is:

1. A method of modeling a business process having a plurality of operations, comprising the steps of:
using a first verb of a process algebra to represent at least one independent operation;
using a second verb of the process algebra to represent a set of interdependent operations; and
using the first and second verbs respectively to differentiate the at least one independent operation from the set of interdependent operations.

SUB 1
2. (Amended) The method of claim 1, further comprising a step of representing the business process as constraints on synchronization of the at least one independent operation and the set of interdependent operations by distinguishing between synchronization of the at least one independent operation and synchronization of the set of interdependent operations.

3. The method of claim 1, further comprising a step of expressing synchronization constraints based on completion of the set of interdependent operations.

4. The method of claim 1, further comprising a step of relaxing transactional boundaries of the operations in order to increase granularity of the operations at an action level.

5. The method of claim 1, further comprising the step of reducing the process algebra to a programmable language.

6. The method of claim 5, the programmable language having an XML syntax.

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Sub h1
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7. (Amended) A system that uses a process algebra for facilitating modeling of business processes comprised of a plurality of business operations being representable at a transaction level and an action level, the system comprising a computer-readable medium that embodies a plurality of computer-executable components, the components comprising:

a user interface component; and

a plurality of model components accessible through the user interface component and adapted to allow a user to create a model of a business process, the plurality of model components comprising a distinguishing model component for distinguishing between concurrent autonomous business operations and concurrent interdependent business operations.

8. The system of claim 7, further comprising a transaction grouping model component for grouping business operations into concurrent interdependent transactions.

9. The system of claim 8, the grouping model component providing synchronization of concurrent interdependent transactions based on the completion of the concurrent interdependent transactions.

10. The system of claim 7, further comprising an action grouping model component for grouping business operations into concurrent interdependent actions.

11. The system of claim 10, the action grouping model component providing synchronization of concurrent interdependent actions based on completion of the concurrent interdependent actions.

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12. (Amended) A system that uses a process algebra for facilitating modeling of business processes comprised of a plurality of business operations being representable at a transaction level and an action level, the system comprising a computer-readable medium that embodies a plurality of computer-executable components, the components comprising:

a user interface component; and
a plurality of model components accessible through the user interface component, the plurality of model components adapted to facilitate a user in creating a model of a business process, the plurality of components comprising at least one boundary establishing component for defining transaction boundaries.

13. The system of claim 12, the at least one boundary establishing component including a component for establishing concurrent operations.

14. The system of claim 12, the at least one boundary establishing component including a component for establishing sequential operations.

15. The system of claim 12, further comprising a compensation model component adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction.

16. The system of claim 15, the interdependent concurrent transactions being children in a parent transaction wherein the compensation model component is invoked by the parent transaction.

17. The system of claim 15, the compensation model component calling compensation routines within the committed interdependent concurrent transactions.

18. The system of claim 15, the compensation model component calling compensation routines within the failed interdependent concurrent transaction.

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19. The system of claim 18, the compensation routines utilizing information within the committed interdependent concurrent transactions.

20. The system of claim 15, the compensation model component calling compensation routines within the failed interdependent concurrent transaction based on information on the committed interdependent concurrent transactions stored within a database.

Sub 1
21. (Amended) The system of claim 13, the computer readable medium residing on a computer system.

22. (Amended) A system that uses a process algebra for facilitating modeling of business processes comprised of a plurality of business operations being representable at a transaction level and an action level, the system comprising a computer-readable medium that embodies a plurality of computer-executable components, the components comprising:

a user interface; and

a plurality of modeling components accessible through the user interface and adapted to allow a user to create a model of a business process, the plurality of components comprising a component for defining concurrent synchronizing constraints as occurring upon completion of the autonomous operations.

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23. (Amended) A method for representing business processes derived from a process algebra as constraints on the synchronization of a plurality of autonomous and interdependent business operations, the method comprising:

distinguishing between synchronization of autonomous concurrent operations and interdependent concurrent operations;
expressing synchronization constraints on completion of autonomous concurrent operations; and
associating transaction operations and groups of business operations.

24. (Amended) A business process scheduling software generated from a process algebra, the scheduling software represented as computer executable instructions embodied in a computer-readable medium and comprising:

a first component for distinguishing between synchronization of autonomous concurrent operations and interdependent concurrent operations;
a second component for expressing synchronization constraints on completion of autonomous concurrent operations; and
a third component for associating transaction operations and groups of business operations.

25. The software of claim 24, further comprising a graphical user interface adapted to allow a user to model a business process using the first component, the second component and the third component.

26. (Amended) The software of claim 24, the software comprising a programmable language and the first component, the second component and the third component perform functions in a schedule.

27. (Amended) The software of claim 26, the programmable language having an XML syntax.

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28. (Amended) A system that uses a process algebra for representing business processes as constraints on the synchronization of a plurality of autonomous and interdependent business operations, the business processes represented as computer executable instructions embodied in a computer-readable medium, the system comprising:

means for distinguishing between synchronization of autonomous concurrent operations from interdependent concurrent operations;

means for expressing synchronization constraints on completion of autonomous concurrent operations; and

means for allowing association of transaction operations and groups of business operations.